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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/598,268	06/21/2000	YASUNORI OGAWA	106187	6416

25944 7590 11/19/2002

OLIFF & BERRIDGE, PLC  
P.O. BOX 19928  
ALEXANDRIA, VA 22320

EXAMINER
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AKKAPEDDI, PRASAD R

ART UNIT	PAPER NUMBER
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2871

DATE MAILED: 11/19/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/598,268

Applicant(s)

OGAWA ET AL.

Examiner

Prasad R Akkapeddi

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 September 2002.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All   b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☒ Interview Summary (PTO-413) Paper No(s). 8.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.                      6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakanishi et al. (Nakanishi) (U.S. Patent No. 5,969,832) in view of Yamanaka (the originally cited reference in Office Action dated March 11, 2002).

a. As to claims 1, 5 and 7: Although Yamanaka discloses a liquid crystal display that comprises all the limitations cited in the original application (and rejected in the Office Action dated March 11, 2002), Yamanaka does not disclose the new limitation cited in the amendment dated 09/04/2002. Nakanishi on the other hand, in disclosing a similar projection image display device containing a liquid crystal display panel (7), discloses that the entrance side substrate portion having a thickness greater than the exit side substrate portion, as can be clearly seen from Fig. 4, due to the addition of micro lenses (6) at the entrance side substrate. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the thicker substrate on the entrance side than the exit side as disclosed by Nakanishi to the device disclosed by Yamanaka for providing a projection device that is capable of displaying a bright and uniform image with good resolution.

As to claims 2-4, 6 and 8-10: Yamanaka discloses that the absolute value of the coefficient of the thermal expansion of the exit side cover (G2) is  $6 \times 10^{-7}$  (silica glass) which satisfies the limitation of not more than  $10 \times 10^{-7}$  /degrees Centigrade, the entrance side coefficient of thermal expansion being  $6 \times 10^{-7}$ , which satisfies the limitation of less than  $37 \times 10^{-7}$  (Col. 2, lines 61-63) and not more than  $10 \times 10^{-7}$ /degrees Centigrade. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the coefficient of thermal expansion values of the substrates as disclosed by

Yamanaka to the device disclosed by Nakanishi for providing a projection device that is capable of displaying a bright and uniform image with good resolution.

As to claims 11 and 12: Yamanaka discloses that his liquid crystal display cell can be used as a projector (Col. 1, lines 45-50). The illumination system and the projection system are inherently included in the projector. Yamanaka also discloses the absolute values of the coefficient of thermal expansion as described above. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt the projector and the coefficient of thermal expansion values of the substrates as disclosed by Yamanaka to the device disclosed by Nakanishi for providing a projection device that is capable of displaying a bright and uniform image with good resolution.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Suzuki et al. (Suzuki) (U.S. Patent No. 5,959,704) discloses a similar display device having micro lenses and with the entrance side substrate being thicker than the exit side.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 703-305-4767. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim who can be reached at 703-305-3492. The fax phone numbers for the organization where this application or proceeding is assigned are 703-

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872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

*PR*

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November 12, 2002

*JK*  
ROBERT H. KIM  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2000